Updated 7 December 2006

Climate Projections Based on Emissions Scenarios for long-lived radiatively active trace gases and future climate impacts of short-lived radiatively active gases and aerosols

Public Review Comments on Draft Prospectus for Synthesis and Assessment Product 3.2

Comments received from 28 July – 28 August 2006

Also available:
CCSP Synthesis and Assessment Products. Four-page background document (dated September 2007). In addition, it is available as a PDF file and can be ordered in hardcopy from the GCRIO Online Catalog

Background Information

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General Comments

First General Comment

The US DOE ClimateChange Science Program Product Development Advisory Committee (CPDAC) held a public meeting in Washington, D.C. August 17-18, 2006 to contact an extensive review of, and received public comments on, the draft synthesis report 2.1a described throughout this draft prospectus as the source for scenarios to be use in preparing synthesis report 3.2. Unfortunately, none of the authors of this prospectus (listed on page 6) attending this briefing and review of report 3.2. Prior to finalizing this draft prospectus, its authors are strongly encourage to read the current draft of synthesis report 2.1 and obtain a briefing on the significant comments and proposed revisions to report 3.2, submitted by members of the CPDAC. It is my understanding that these comments will be posted to the CPDAC web site some time during the month of September 2006.

Response: All SAP 3.2 authors (Levy, Shindell, Gilliland) received copies of the draft of SAP 2.1a prior to the public meeting. One 3.2 author (Levy) has been involved with the 2.1a process leading up to the CPDAC public meeting and has participated in two post-meeting teleconferences discussing both the results of the public meeting and the planned data release by SAP 2.1a.

Action: SAP 3.2 will continue its contact and cooperation

with SAP 2.1a. A member of SAP2.1a will be invited to the SAP 3.2 Workshop scheduled for October 30 – 31, 2006. Comments on 2.1a from the CPDAC will be forwarded to all 3.2 authors for their consideration and use.

Second General Comment

I am confused by the reference to acquiring stakeholder input through a "public workshop" (mentioned in line 27 on page 6). Is this the same meeting as the "science workshop" mentioned in line 10 on page 5? I would think that the agenda and expected attendance at a science workshop would be vastly different that that at a "public stakeholder workshop", and holding both types of meetings under one venue could miss the mark in attendance from both categories of individuals. Holding a public stakeholder workshop as an entire separate meeting, rather than an adjunct to some previously scheduled meeting of public stakeholders, could well draw very meager attendance, as I understand has been the experience for reviews of some of the earlier synthesis reports. For example, if the authors are seeking comments from public stakeholders on applications of climate scenarios to studies of agricultural impacts, th en its meeting would be best scheduled in conjunction with an existing national meeting of agricultural interests. A science workshop of, say, climate modelers, would best be scheduled in conjunction with a national, or perhaps even international, meeting at which a large contingent of climate modelers are already likely to attend.

Response: Initially two workshops were planned, but this was not possible with the current schedule in the Prospectus. The public workshop and the science workshop are the same. There will be 1 workshop which will assess the results of the climate integrations outlined in 1.1 and 1.2. This workshop will be open to the public including any members of CPDAC who are interested, any other NGO's and any interested individuals.

Action: "Public workshop and "science workshop" are now both called "workshop" in the Prospectus. Changes were also made in the text of sections 1.3 and 3 to further clarify the nature and goals of the workshop.

Specific Comments

Page 3, Line 4

The projected stabilization levels of 750, 650, and 550 ppm listed here for analysis are inconsistent with the projected levels of emissions contained in the scenarios in the current

draft of synthesis report 2.1a. That report includes projections that global CO2 emissions will increase from current levels of 7 GT per year to levels exceeding 15 GT/year or even exceeding 20 GT/year. The well-known Wigley, Richels, Edmunds paper from Nature magazine of several years ago indicates that very substantial reductions in emissions from current levels will be required to stabilize atmospheric concentrations at 750, 650 or 550 ppm. For 550 ppm, the stabilization emission rate is approximately 1 GT/year, more than a 70% reduction from current emission rates, and roughly equivalent to the global emission rate that existed in the year 1927. If this synthesis report intends to use the higher (i.e., 15 to 20 GT/year) emission rates inferred from synthesis report 2.1a, than atmospheric stabilization concentrations of many thousands of ppm would be more realistic.

Response: The projections that global CO2 emissions will increase from current levels of 7 GT per year to levels exceeding 15 GT/year or even exceeding 20 GT/year by 2100 are for the business as usual scenarios which each of the SAP 2.1a models first ran to establish their baseline. We will be using the stabilization scenarios determined by each integrated assessment model. Hakkarinen is correct that these stabilization scenarios result in greatly reduced CO2 emissions by the end of 2100.

Action: None is needed.

Page 4, Line 24

Relying solely on model simulations from GISS and GFDL would be inadequate for this analysis. At a minimum, the study should also review existing simulations from the CCSM modeling (including its intermediate resolution T-85 runs and possibly some of the higher resolution (T-170, T-340?) runs that are currently in limited test mode. Consideration of regional climate model runs, as well as statistically downscaled simulations, from the NARCCAP, PIRCS, and other related studies (e.g., California Energy Commission-sponsored climate simulations) should also be included in the analysis plan.

Response: The NCAR CCSM is included in 1.2 and may run one scenario in 1.1. Alice Gilliland will contribute from her background with regional climate models and statistical downscaling. There are no plans for new computer simulations by regional climate models.

Action: The NCAR participation was added to section 1.2 and 5.2 and a brief discussion of regional climate model runs based on regional dynamic downscaling was added to section 1.2.

Page 5, Line 12

NOT holding the science workshop, and at least one public stakeholder workshop during the course of this prospectus would be, in my opinion, a show-stopper for this study. "Funding permitting", is not an option. The authors should state, in the strongest terms possible, in the revised prospectus that a credible synthesis report cannot be completed without conduct of the aforementioned workshops.

Response: As mentioned in response to an earlier, general comment, we have combined the two separate workshops (science and public stakeholder) into a single, more visible venue that we believe will have greater overall utility. **We agree that a workshop is critical.**

Action:"Funding permitting" has been dropped and the workshop will be held.

Page 6, Line 1

I would encourage the prospectus authors to consider adding contributors to the drafting of this synthesis report from members of the DOE CPDAC, or, at the least, solicit nominees for authors by polling members of the DOE CPDAC for the names of prospective contributors.

Response: DOE has no federal scientists with the necessary expertise to be part of the 3.2 author's team. We will seek additional authors, as discussed in section 3. In lieu of explicit SAP authorship, we are also encouraging interested scientists to perform research related to SAP 3.2 and to prepare drafts and/or papers for the refereed literature that we can then discuss and reference in SAP 3.2.

Action: None at this time.